

US 29 North Corridor Advisory Committee Meeting #8

Montgomery County **RAPID TRANSIT**

US 29

East County Regional Services Center
Silver Spring, Maryland
September 22, 2016
6:30 p.m. to 9:00 p.m.



Maryland Department
of Transportation

MC DOT
Montgomery County Department of Transportation

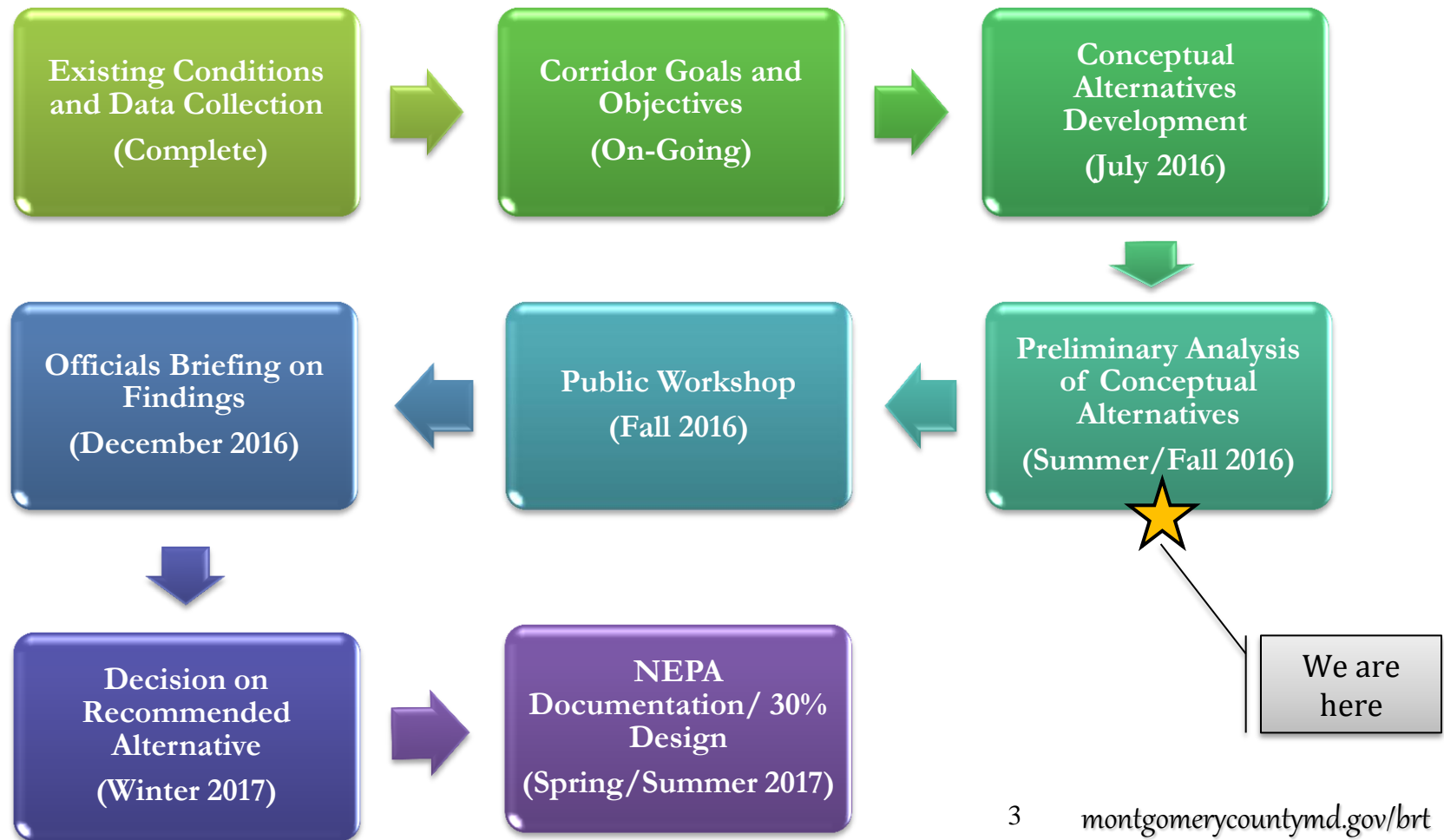
Welcome

Agenda:

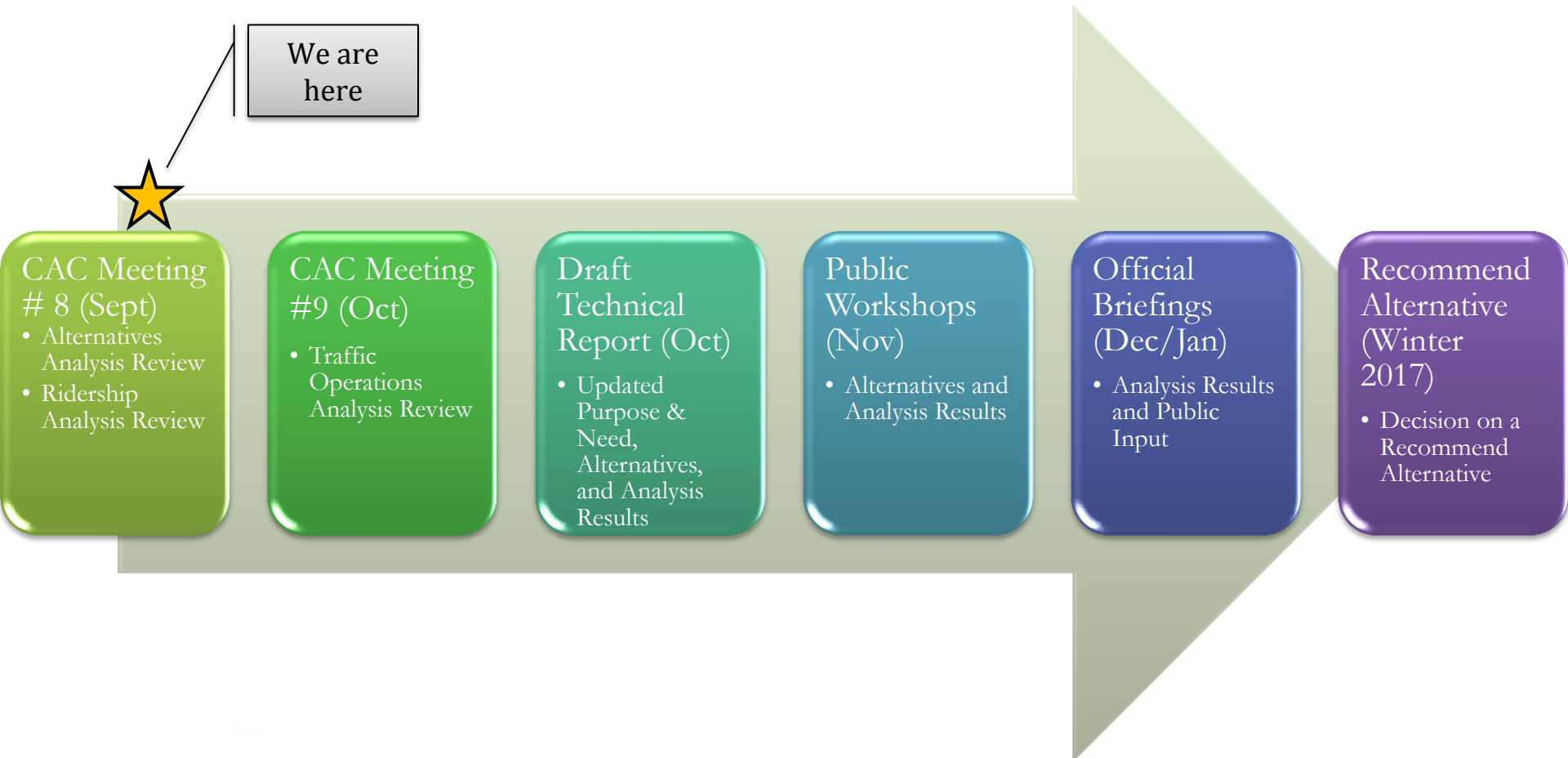
- Welcome & Meeting Overview
- Progress Update & Upcoming Milestones
- Alternatives Analysis Review
 - Alternative A
 - Alternative B
- Ridership Analysis Review
 - Ridership Data Assumptions
 - Ridership Data Comparison
- Tabletop Discussion

Note: Opportunities for question and answer sessions will be provided at appropriate breaks in the presentation. Please hold questions and comments until specified.

Progress Update



Upcoming Project Milestones



Selection Criteria

Items highlighted in **orange** will be discussed tonight



Objectives for Meetings 8 & 9

Questions we hope to address with these meetings:

- **What are the potential physical impacts?**
- **What is the anticipated transit ridership?**
- What are the potential effects on traffic operations?
 - Which alternative operates better north of Stewart Lane?
 - Which alternative operates better south of Stewart Lane?
 - What options might there be to mitigate issues identified in the analysis?
 - What does this mean for the recommended alternative?

Meeting 8

Questions?

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Alternatives Review

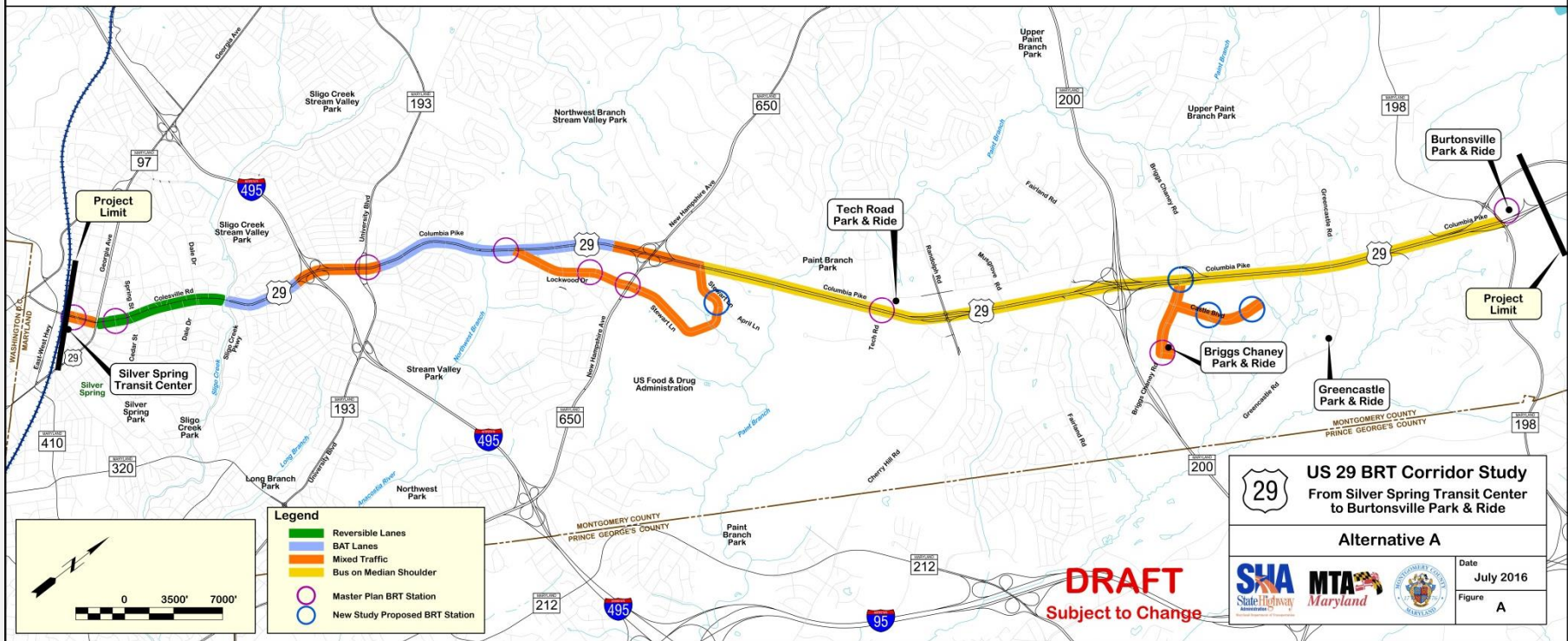
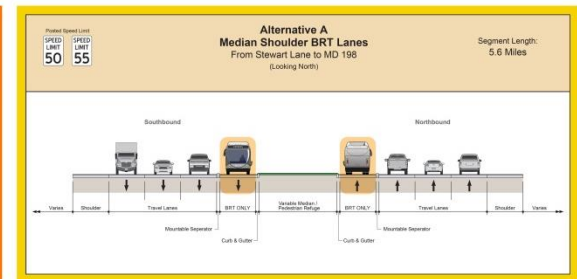
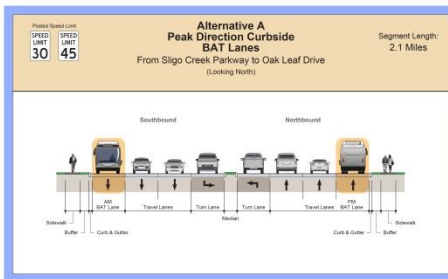
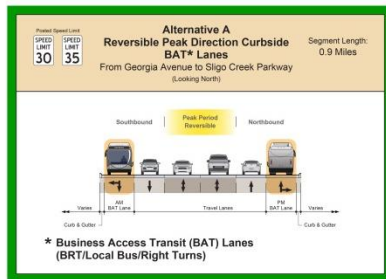
Alternatives Under Consideration:

- **No-Build Alternative – for comparison purposes**
- **Alternative A:**
 - Curbside Business Access Transit Lanes (aka, Bus And Turn Lanes or BAT Lanes)* in South
 - Median Shoulder BRT Lanes in North
- **Alternative B:**
 - Curbside Managed Lanes (HOV2+/BAT)** in South
 - Bus on Outside Shoulder in North

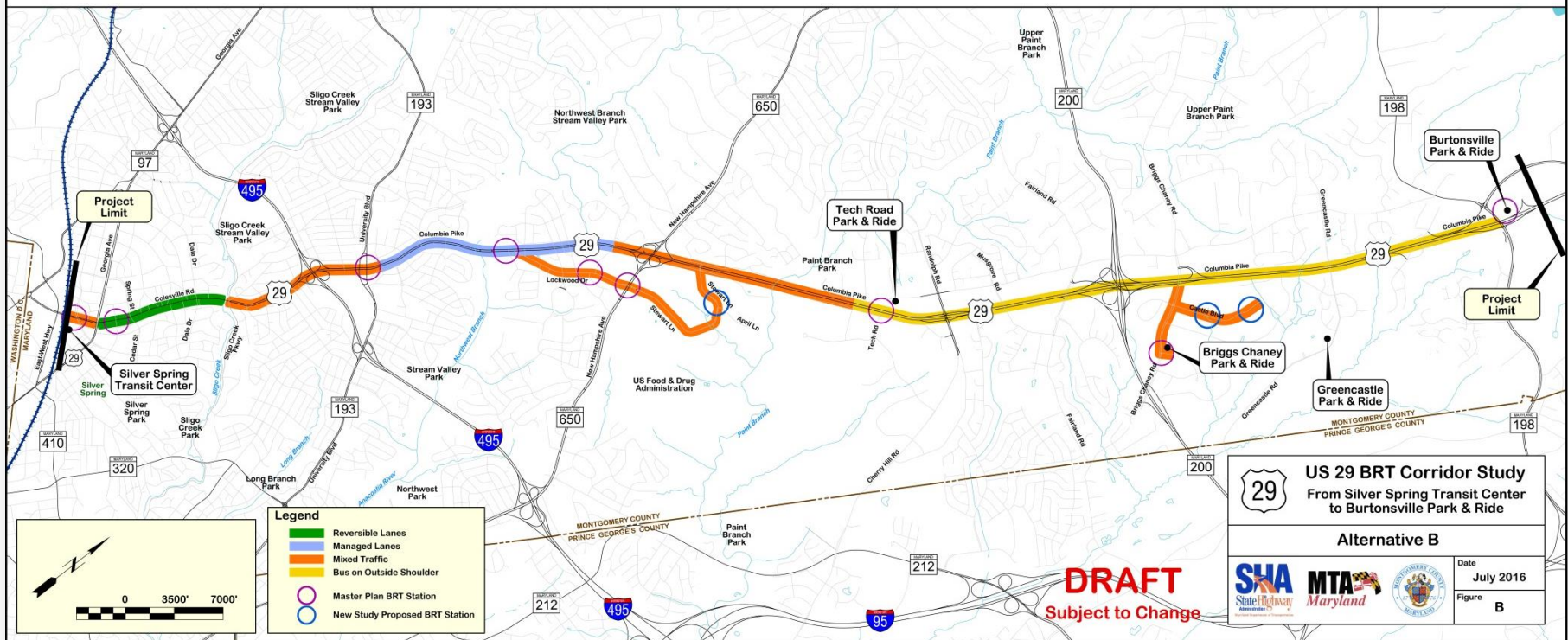
***BAT Lanes = BRT buses, local buses, right turning traffic**

****Managed Lanes (HOV2+/BAT) = Vehicles with 2 or more persons, BRT buses, local buses, right turning traffic**

Alternative A



Alternative B



Alternatives Analysis Review

Elements Analyzed*:

- Range of Potential Impacts to Natural Resources
- Range of Potential Impacts to Socioeconomic and Cultural Resources
- Range of Potential Impacts to Properties

*Preliminary planning-level results from the analyses are presented as approximated ranges.

Alternatives Analysis Review

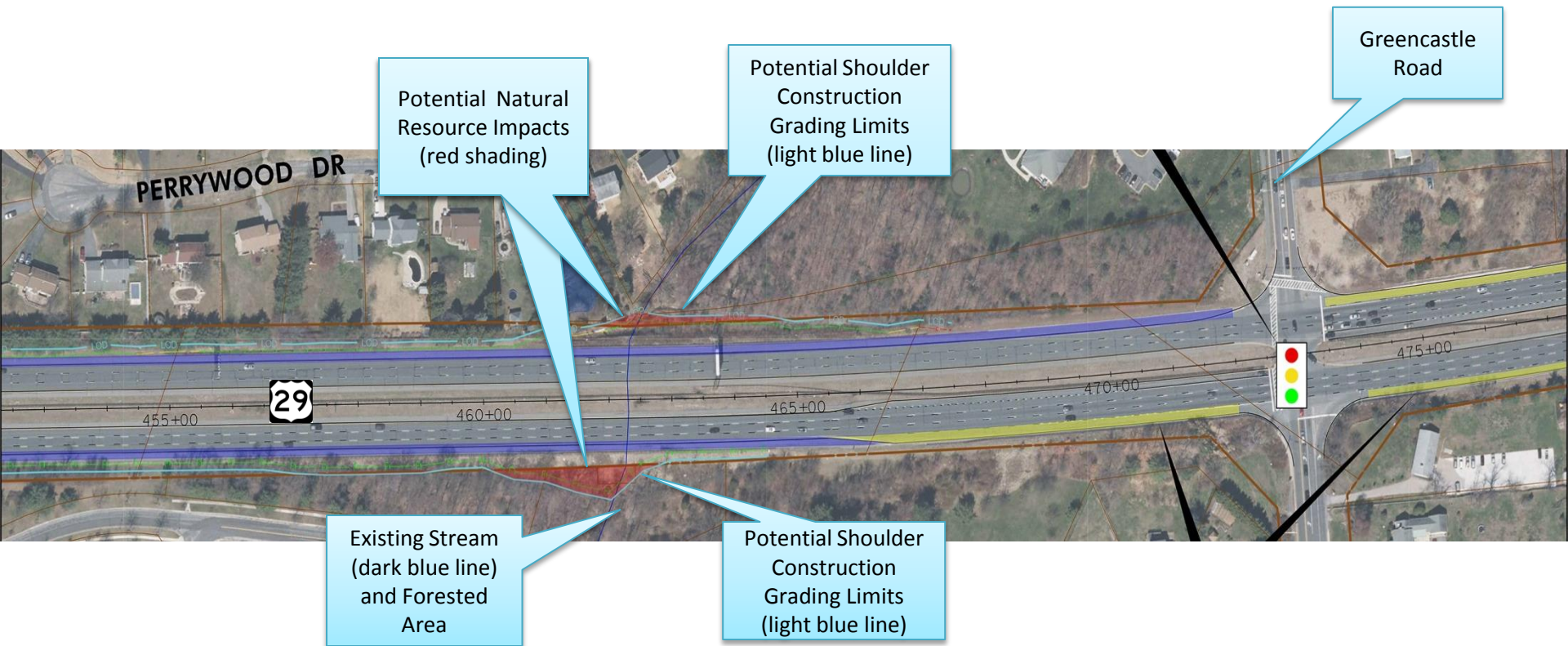
Range of Potential Impacts to Natural Resources:

	Wetlands (acres)	Streams (linear feet)	Forested Areas (acres)	Floodplains (acres)	New Impervious Surface (acres)
Alt. A	0.0 - 0.2	0 - 20	1.0 - 3.0	0.0 - 0.5	8 - 10
Alt. B	0.0 - 0.2	0 - 125	2.0 - 5.0	0.0 - 1.0	2 - 4

- Alternative B has potentially more impact associated with potential shoulder reconstruction.

Alternative B

Example of Potential Impacts to Natural Resources



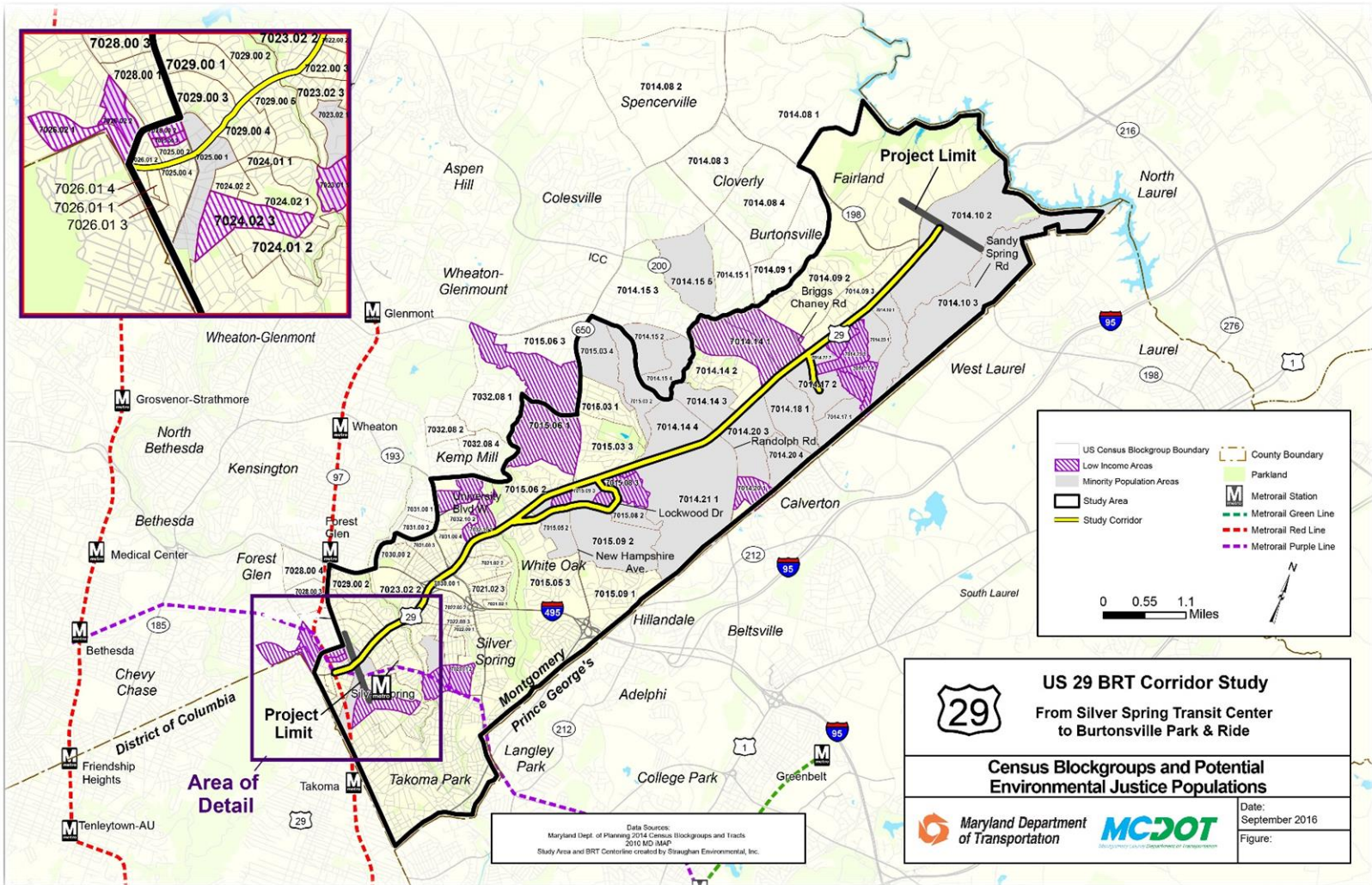
Alternatives Analysis Review

Range of Potential Impacts to Socioeconomic and Cultural Resources:

	Environmental Justice Communities (acres)	Parks (acres)	Historic Properties (acres)
Alt. A	0.2 - 0.5	0.0 - 0.2	0.0 - 0.1
Alt. B	0.5 - 1.0	0.0 - 0.2	0.0 - 0.1

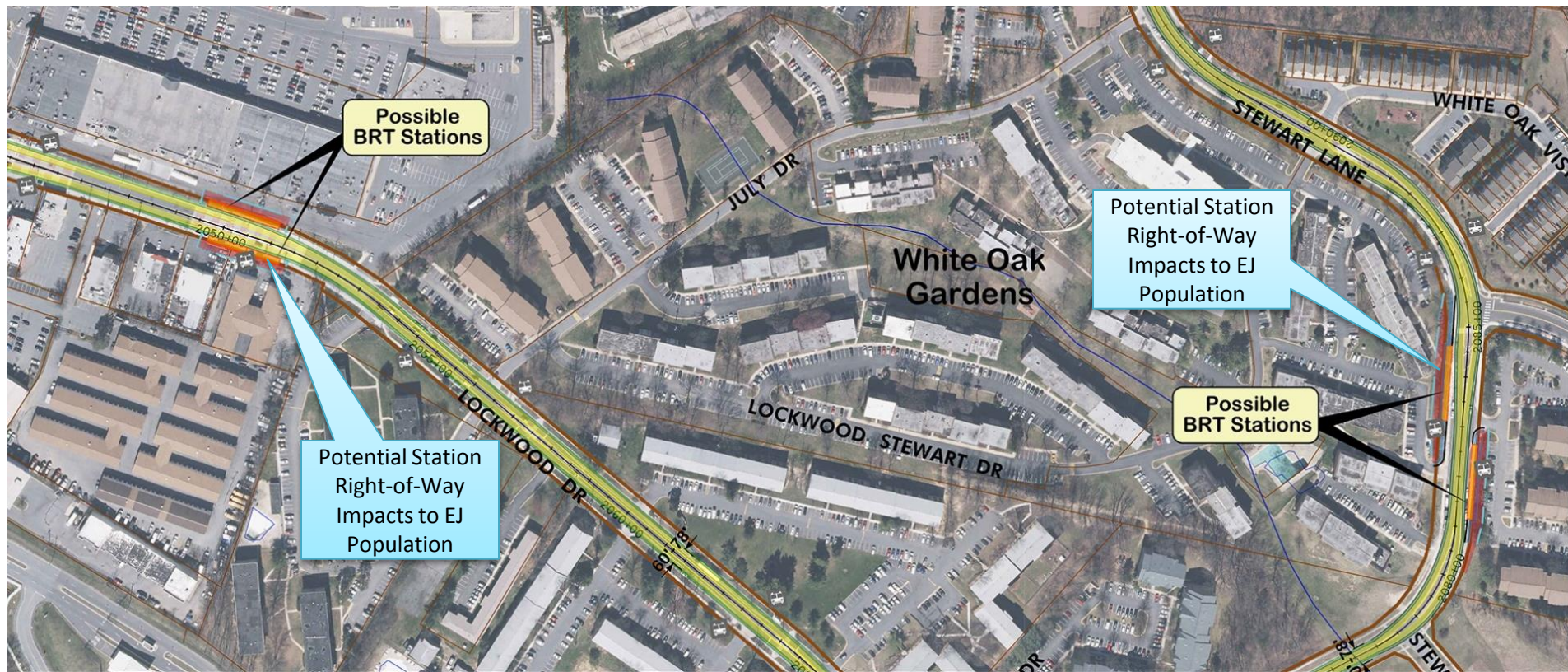
- Neither alternative is anticipated to have significant impacts.
- Alternative B has potentially more impacts associated with potential shoulder reconstruction.

Environmental Justice Populations



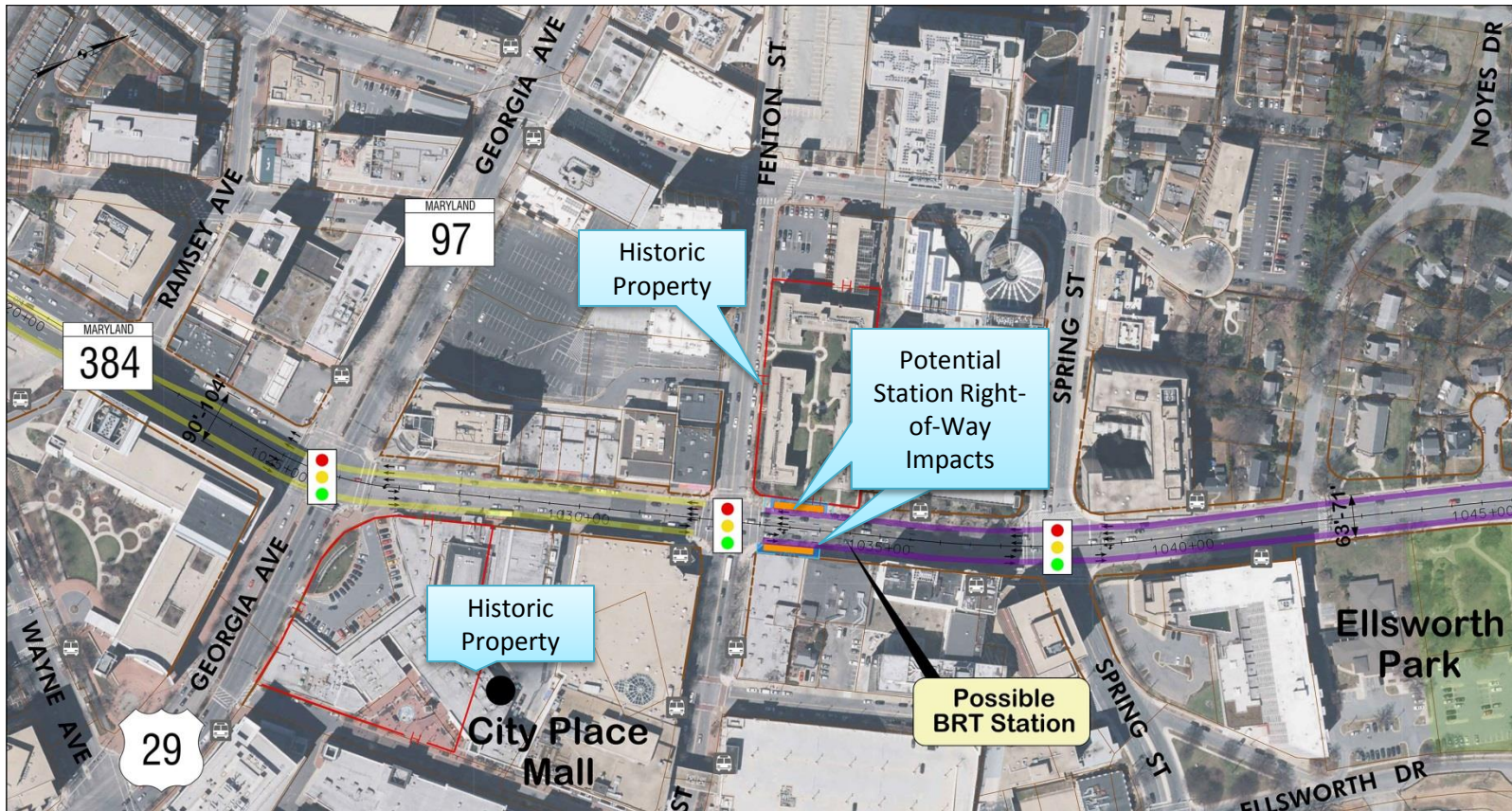
Alternatives A and B

Example of Potential Impacts to Environmental Justice Populations



Alternative A

Example of Potential Impacts to Historic Property



Alternatives Analysis Review

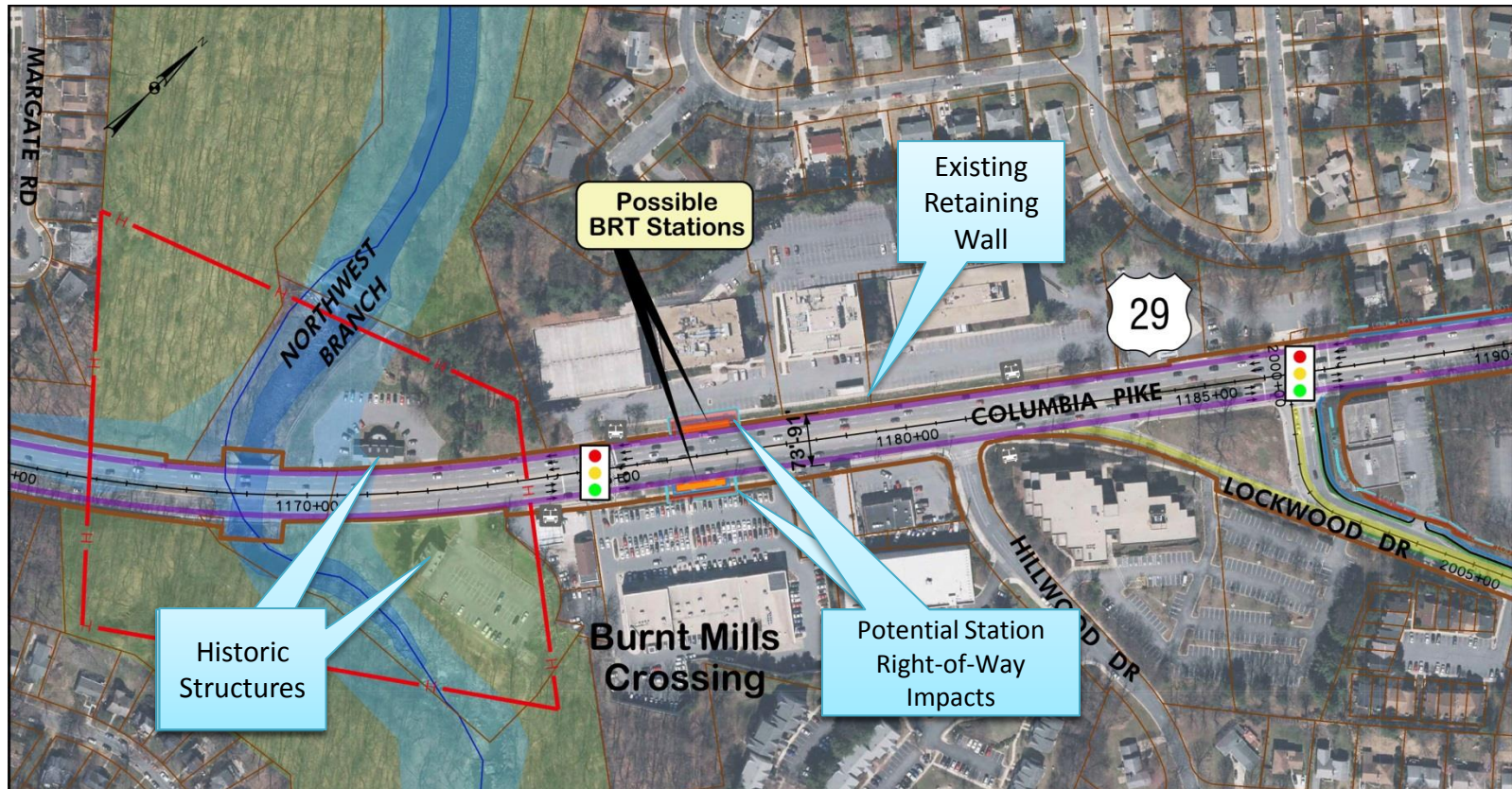
Range of Potential Impacts to Properties:

	Right-of-Way (acres)	Residential Properties (number)	Commercial Properties (number)
Alt. A	2.0 - 4.0	5 - 15	0 - 5
Alt. B	3.0 - 6.0	15 - 20	5 - 10

- There are no property displacements anticipated.
- Alternative B has potentially more impact associated with potential shoulder reconstruction.

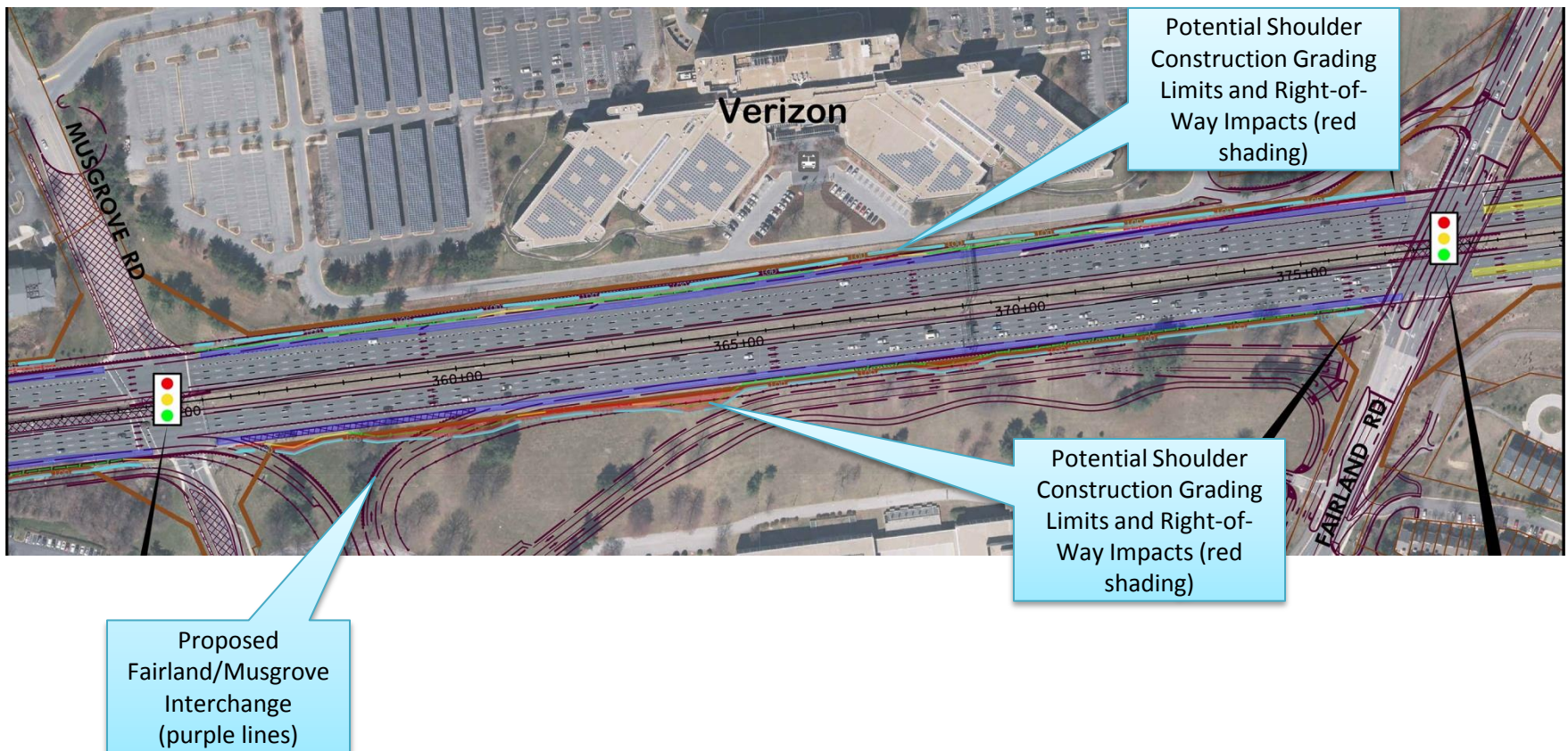
Alternative A

Example of Potential Right-of-Way Impacts to Property



Alternative B

Example of Potential Right-of-Way Impacts to Property



Questions?

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Ridership Analysis Review

Topics:

- Regional Demand Model
- BRT Assumptions
- Changes to Existing Bus Transit Network
- Results: 2040 Forecasted Peak Period Boardings
- Results: 2040 Forecasted Daily Boardings
- Results: Accessibility and Mode Share
- Ridership Project Goals

Ridership Analysis Review: Ridership Demand Model

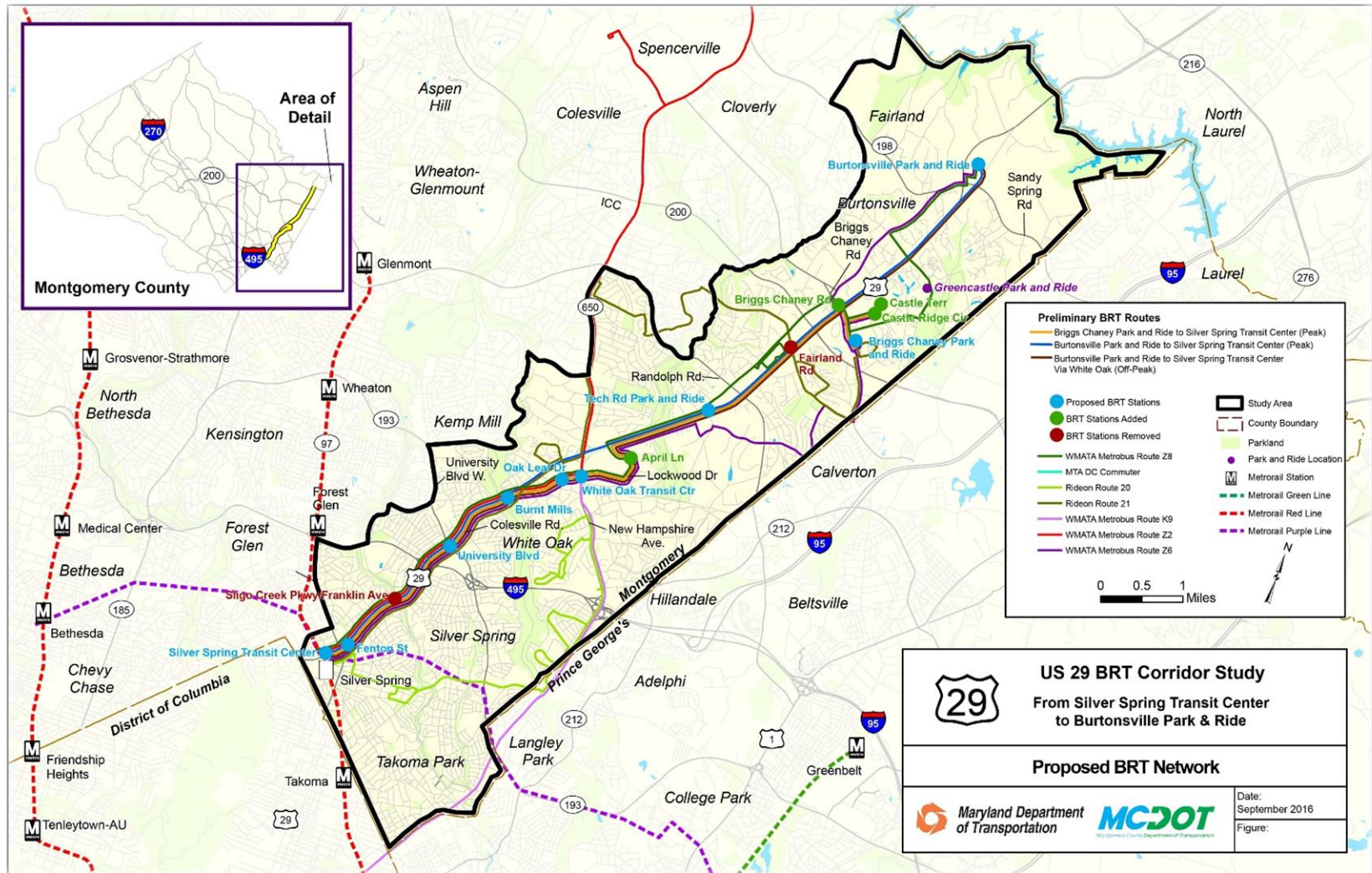
- Same Regional Demand Model as the Purpose and Need: TPB/MWCOG regional travel demand model version 2.3.57 with model validation and refinements from 2015
- Same Study Area as the Purpose and Need

Results are meant to be comparable to the No-Build so the project team can compare alternatives.

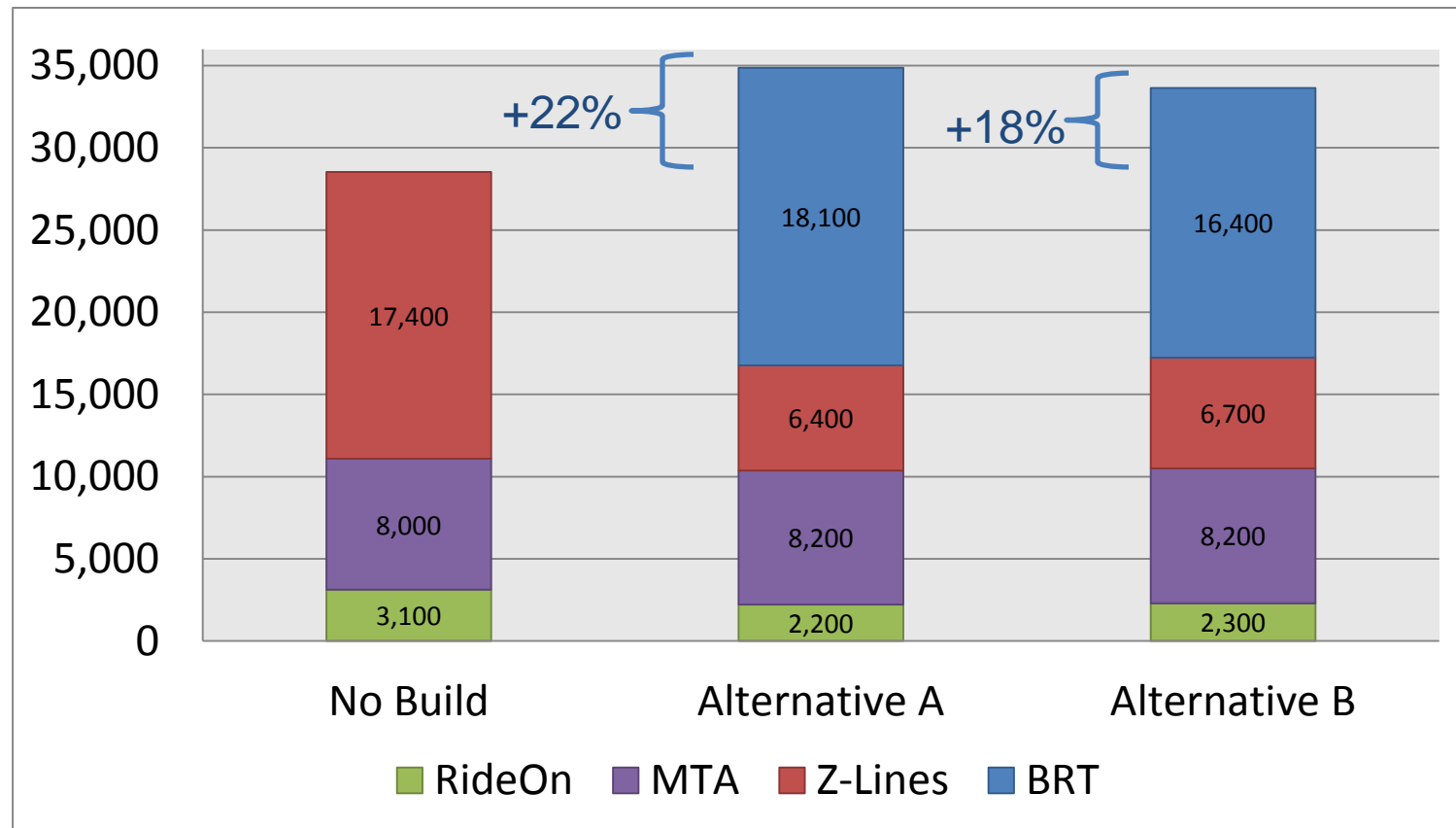
Ridership Analysis Review: BRT Assumptions

- Headways: 6 minute during peak and 10 minute off-peak
- Three BRT route patterns identified
 - 6 stops along mainline US 29 (Peak)
 - 11 stops along mainline US 29 with divergence to Lockwood (Peak)
 - 9 stops along mainline US 29 (Off-peak)

BRT Operations Plan & Routes



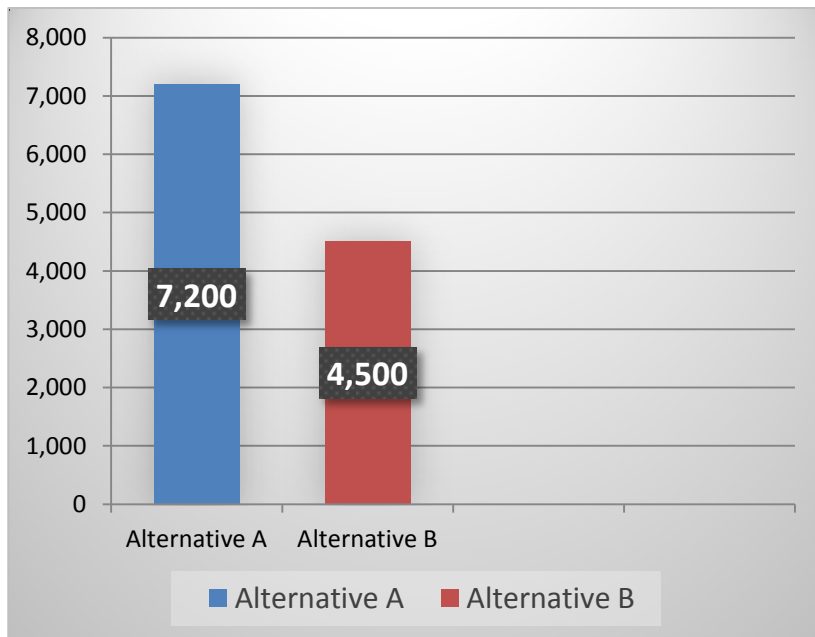
Ridership Analysis Review: 2040 Daily Boardings



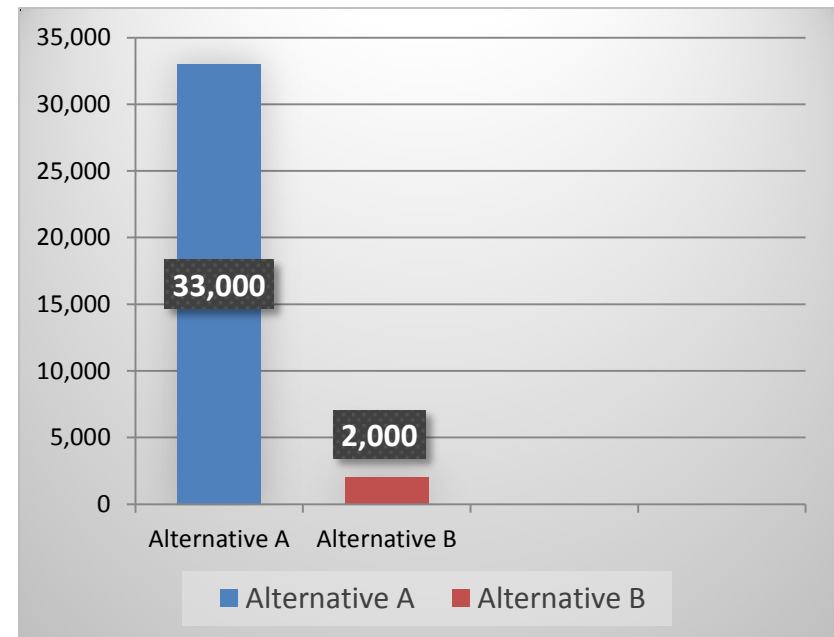
- Alt. B ridership affected by slightly slower travel speeds

Ridership Analysis Review: 2040 Employment Accessibility

Jobs within 45 minutes via Transit
(Increase over No-Build)



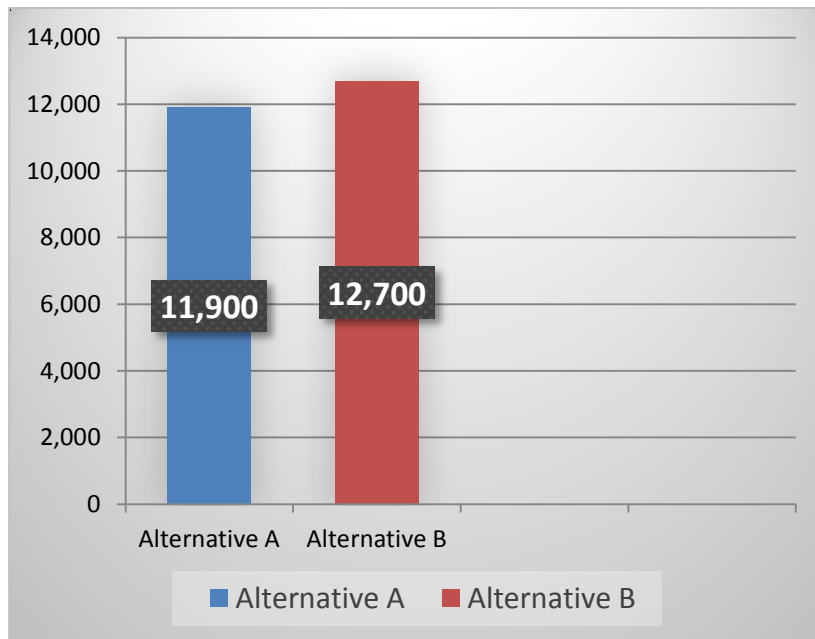
Jobs within 60 minutes via Transit
(Increase over No-Build)



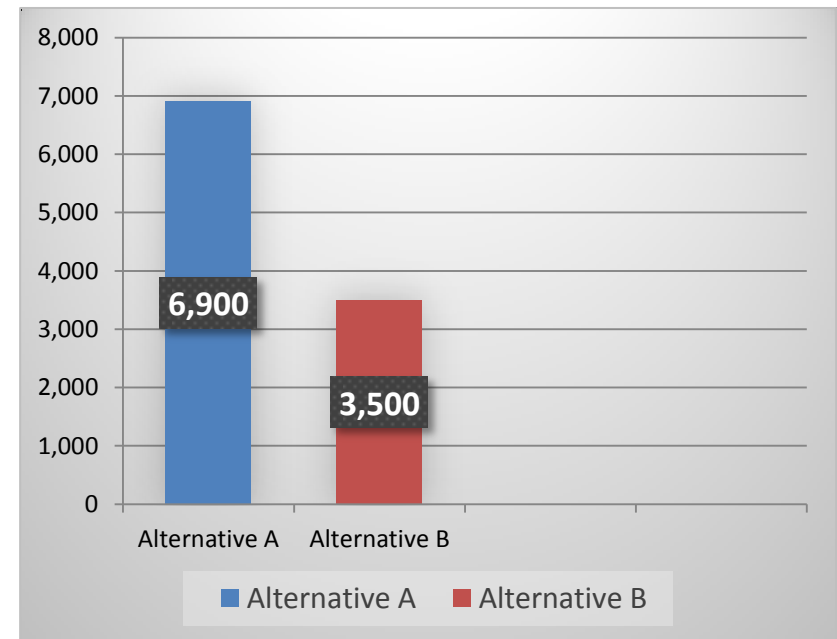
- Both alternatives increase transit accessibility over the No-Build
- Alternative A has nominally higher numbers due to differences in coverage and run time.

Ridership Analysis Review: 2040 Population Accessibility

Population within 45 minutes via Transit
(Increase vs. No-Build)



Population within 60 minutes via Transit
(Increase vs. No-Build)



- Both alternatives increase transit accessibility over the No-Build
- Alternative A has nominally higher numbers due to differences in coverage and run time.

Ridership Analysis Review: Ridership Project Goals

- Implementation of BRT would provide high-quality transit connection between Silver Spring Transit Center and the Burtonsville Park and Ride
- BRT provides accessible system without reducing existing ridership
- Daily boardings in corridor would **increase** with implementation of BRT
- Transit demand needs used to develop bus service plan to optimize transit reliability
- Employment and population transit accessibility increases under both alternatives

Ridership Analysis Review

Summary of Bus Boarding Changes for Alternatives A and B versus No-Build

Transit Ridership 2040	Total Transit			Bus Rapid Transit		
	No-Build	Alt. A	Alt. B	No-Build	Alt. A	Alt. B
Boardings	28,500	34,900	33,700	-	18,100	16,400

- Total transit ridership increases over No-Build by 6,400 (22%) for Alt. A and by 5,200 (18%) for Alt. B.
- BRT is higher by 10% for Alt. A.

Summary

Element Analysis Summary:

	Right-of-Way (acres)	Wetlands (acres)	Streams (linear feet)	Forested Area (acres)	Floodplain (acres)	Parks (acres)	Historic Properties (acres)	Potential BRT Ridership
Alt. A	2.0 - 4.0	0.0 - 0.2	0 - 20	1.0 - 3.0	0.0 - 0.5	0.0 - 0.2	0.0 - 0.1	18,120
Alt. B	3.0 - 6.0	0.0 - 0.2	0 - 125	2.0 - 5.0	0.0 - 1.0	0.0 - 0.2	0.0 - 0.1	16,430

Tabletop Discussion

In an open house format, CAC members will have the opportunity to:

- Discuss the alternatives selection criteria in more detail
- Gain an understanding of the potential physical impacts associated with the alternatives.
- Gain an understanding of the how ridership is anticipated to change
- Ask the study team questions related to alternatives and ridership analyses.



Questions?

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Adjournment

Thank you for participating!